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## III. GENERAL.

*Die Urtheilsfunction. Eine psychologische und erkenntnisskritische Untersuchung.* Von WILHELM JERUSALEM. Wien & Leipzig; W. Braumueller, 1895.

Professor Jerusalem, who is well known by his text-book of psychology and study of the education of Laura Bridgman, attacks in this book a very important problem,—the problem of the relation of modern logic to modern psychology. Although the great Logics devote a good deal of space to psychological analysis, and although scattered articles on the connection of the two sciences have appeared in the technical magazines, no independent and systematic attempt has been made to coördinate them; to translate logic into terms of psychology, and to show the genesis of the logical from the psychological. Hence the Logics, despite their professed foundation on psychology, seem to the psychologists to be largely 'in the air,' while the Psychologies seem to the logicians to neglect patent and important facts of the mental constitution. Under such circumstances, a volume like the present cannot but be welcomed by the representatives of both disciplines.

Judgment, the author begins, is the form in which the results of all thought-processes are cast. We must investigate the judgment from the psychological point of view, asking what we do when we judge, what goes on in us when we take a judgment to be true or untrue. But such an investigation implies a psychology, or at any rate a *credo* with regard to fundamental psychological questions. First, as to the relation of mind to body. "The physical and the psychical are neither of them anything but processes. . . . The reflective working-over of physical processes, however, makes the assumption of a substrate indispensable, that of psychical makes the same assumption impossible." Substrate is the criterion, and the sole criterion. And the fact that the psychical is substrateless occurrence gives a meaning and a value to the 'unconscious.' Secondly, as to psychological method. We must begin by introspective analysis. But as the results of our analysis are processes, we must go on to ask at what point of mental development the complex under discussion appears (genetic method). And as the beginnings of mind have a biological setting, we must proceed to inquire how the investigated complex can help the individual or the race in the life struggle (biological method).—The investigation implies, further, a definite attitude to logic and language. Logic seeks to determine the general conditions of objective certainty and probability, or, in other words, those under which judgments attain to objective certainty and probability. Its danger is that, in the search for convenient forms, it may substitute anatomy for vivisection, the discrete point system for the curve,—and make the concepts into which a judgment is articulated prior to the formative and objectifying function of judgment itself. Theoretical linguistics seeks to ascertain the laws of the formation of language. Its danger is to isolate the word, as logic isolates the concept. The concept is the result of many judgments: the word is simply an element in a judgment. No words, no judgment.—Finally, the investigation will assist our metaphysical constructions.

The most noteworthy section of this first chapter is, perhaps, that which deals with the relation of language to psychology and logic. Words are not ideas, the author tells us, but judgment-elements, *i. e.*, not part-existences, but part-meanings. The point receives further consideration below. On the other hand, it is not probable

that the distinction of mental and physical as not-substrated and substrated will find acceptance.

The second chapter contains a historical-critical survey of existing theories. Three sections are devoted to the Greek philosophers, to the scholastics and to the moderns down to Hume. A fourth discusses the views of living writers: Brentano's belief, Sigwart's synthesis, Wundt's analysis, and Bradley's and Gerber's shaping and objectifying. The writer has his private polemic to wage with Brentano's school, here as in the foregoing chapter. He finds a portion of the truth in each of the three first theories, but himself, following Gerber, adopts the fourth. His discussion is most interesting, but, as a summary, hardly lends itself to further summarising.

Even Brentano admits that every judgment contains an idea. But the judgment is not an association of ideas; partly, because an association has no finality as the judgment has, partly because in the judgment nothing is or is to be associated. Judgment differs from idea, first, in the fact of articulation, and secondly in the fact that in it the ideated object is regarded as an independent centre of force, in the exercise of its activity. Idea: "flowering shrub;" judgment: "the shrub—is-in-flower." Judgment is thus a shaping and objectifying of ideation: its result is a *modified* idea. The importance of this thought-form to primitive man, who has to orientate himself in a world of sense-perceptions, is obvious.—Judgment contains, besides idea, a feeling process. The idea which makes us pass judgment is the idea which interests us, *i. e.*, which arouses our craving for intellectual activity. The craving is satisfied by judgment, first, because judging is activity (not passivity, like ideation), and secondly because it brings the train of ideas to a conclusion, giving the conclusion a form which is normal to consciousness.—Judgment also contains will-processes. Not only is judging an action, a shaping or moulding at the instance of internal impulses,—judgment actually comes into being through the turning to account of these impulses by primitive man. Whenever a moving object attracted the attention, the apperception-mass of the observer's own bodily movements was of necessity aroused,—the beginning of the movement referred to a voluntary impulse in the object, and its continuance to the object's voluntary activity. Moving objects, again, necessarily attracted the attention: only on that condition was life possible. Add to this that the movement would often be imitated, and communicated to other men by the imitative gesture. The voluntary impulse involved naturally reacted upon the apprehension of the movement of the object.—Language begins with the inarticulate cry which expresses emotion. It is developed under the necessity of mutual understanding and communication. In the first place, frequent repetition blunted the emotive attribute of the utterance: the sounds gained in articulation as they lost in affective tone. Secondly, these freed sounds entered into stable associations with ideas. The naturalness of such associations is shown by their formation by Laura Bridgman. The word or 'root' of this stage is a proposition, not a verb or substantive. Judgment is implicit in it; but does not become explicit or reach its full development until, still by the necessity of mutual understanding, a second root is added to the first. One, then, becomes the vehicle of the activity, the thing, and the other that of this thing's activity. Shaping and objectifying are thus complete.

This is, to the psychologist, the most important chapter of the work. It is important not only because of its analysis of the act of

judgment into its psychological part-processes, and its hypothetical account of the genesis of the act, but because of its bold facing of the ultimate problem,—the passage from what is, the psychological, to what means, the logical.<sup>1</sup> A group of similarly constituted beings, the author says in effect, *must* understand each other; their utterances *must* convey a meaning to their fellows. The only difficulty is to get these meanings associated to definite ideas; and we have instances of the way in which it is overcome in certain pathological cases and in the educational history of every child. Given the biological conditions, and logical significance cannot help but emerge: the animals understand one another. The writer's outspoken insistence on this point is most valuable. Whether we accept his analysis of the judgment-process exactly as it stands is, on the other hand, a matter of comparatively small moment. A good deal might be said on behalf of association, if one were allowed to define that term; and a good deal also on the author's conception of the relation of judgment to language. But the discussion could not be inserted here, for lack of space, even if it were, as it is not, of determining influence upon our estimation of the work before us.

Chapter IV treats of the development of the judgment function, with constant reference to the motto of the book: *Der Mensch begreift niemals wie anthropomorphisch er ist*. We have now the subject and predicate as judgment-elements. The subject-word, denoting the vehicle of activity, soon comes to denote the vehicles of all similar activities; it gives rise to the concept. And it comes to denote, further, not only actual activity, but—the way being prepared by association—potential activity. (In the denominative judgment "That is a tree," the 'that' is the effect of the tree's activity; the tree is the subject-word.)—The predicate-word is the complement of the subject-word; it is never independent, but, while separating the thing's activity from the thing, tells us always what the thing wills or may will. As distinct in language, however, the predicate-word may give rise to new subject-words: 'warm' is personified as 'warmth,' and becomes a subject. In this way arise abstract concepts. (Impersonal judgments are not mere predicates: their subject is in every case the spatial and temporal surroundings of the activity predicated.)—Recollective and expectant judgments show the formative and articulating function of the judgment in general as well as its anthropomorphism. Recollective judgments are stated in past time: the preterite is psychologically a *plus*, denoting a reference to the speaker, but logically a *minus*, denoting an individual experience. Expectant judgments are stated in future time: they predicate a tendency to activity, a *Willensrichtung*, of the thing.—The recollective judgment, if its subjective element be eliminated, passes over into the conceptual judgment, stated in present time. The present is not temporal, but objectifying. The separation of a concept's permanent attributes from itself, by a special predicate-word, is to be sought in biological motives: the necessity of descriptive communications, of purposive investigation of one's environment, etc.—Concepts of relation may become subjects, centres of force, just as may object-concepts and attributive concepts. Thus we have judgments of magnitude and number, equations and hypothetical judgments. We also possess judgments of our own mental experiences. Even in them, the judgment objectifies. In "I am glad," the 'I' is

<sup>1</sup> It must be noted that Professor Jerusalem differs from Mr. Bradley in his attitude to the problem. To him, an idea, as "idea," can never be a meaning. Meaning belongs only to the judgment. Cf., esp., p. 186.

the vehicle of forces operative in others as well as in myself, a centre of forces in the universe.—Our own judgments are active and final analyses. When contents are presented to us in judgment form, on the other hand, we have to synthetise, to associate, and only when the unifying process is complete, to judge for ourselves. Here arises the *question*, the expression of the feeling of wonder. If the presentation of judgments is incomplete, our own judgment function is inhibited: to remove the inhibition, we formulate our astonishment, not in a judgment, but in the question. Every stage of judgment presentation has its corresponding question.

The object of the chapter, as the above summary sketch of its contents shows, is to trace the continuity of the anthropomorphism of the judgment process through all its forms. First applied to perceptions, recollections and expectations, the judgment function is able later to grapple with natural laws as permanent attributes of concepts, and as the expression of relations. Throughout, judgment is shaping, articulating and objectifying; becoming more and more abstract in its personifications, but never shaking itself free from them.

In this chapter the author has already passed beyond the sphere of direct psychological interpretation, and employs a logical short-hand, derived from the psychology of earlier chapters, in his explanation of the various forms of judgment. In Chapter V—on the validity of the judgment—we are taken still further from psychology. Some points, however, may be mentioned here. First, as to the truth of a judgment. Truth is implicit in every primitive judgment: the judgment is affirmative. But if later experience modifies the affirmation (the stick standing in the water is broken: the stick drawn out proves to be unbroken), the primary judgment is rejected, with an accompaniment of vivid feeling. Negation is the verbal expression of this voluntary impulse of rejection. When it has grown familiar, the truth of a judgment can become explicit.—Belief is predominantly feeling, the “feeling of (the judgment’s) agreement with my present view of the universe.”—Existential judgments arise when judging has long been customary, when the truth and falsehood of judgments are explicitly recognised, and when the feeling of belief has been developed in its various forms and degrees.—Perception is pre-linguistic judgment. Tactual perceptions are the most real, and imply voluntary impulse. An obstacle (complex of tactual sensations) is interpreted as the effect of a foreign will; but the apperception in this simplest judgment is unconscious. Language gives the judgment process its final and perfect form, in which the apperception-mass is conscious.

The writer fears that the introduction of an ‘unconscious’ apperception-mass (primitive voluntary impulses) will prejudice his readers against the general theory of judgment set forth in the book. But the ‘unconscious,’ like the “voluntary impulse,” admits of so many interpretations that every psychologist will be able to fit the theory to his own standpoint and terminology; and the essence of it, even here, is the biological reference, not the unconscious psychological process. More serious is the contradiction which appears to be involved in the author’s view of the part played by language in judgment formation. He must, to be consistent, either assume that an ‘unconscious language’ is engaged in the process of perception, or get some other word than ‘judgment’ to express the proton of judgment implied in the perception.

The concluding chapter is entitled “The epistemological (*erkenntnisskritische*) significance of the judgment function.” The

author's theory enables him to reject the monistic systems of idealism and materialism, and to prove the inadequacy of Avenarius' conception of mental life as *Erhaltung des Gehirns*. A discussion of the physical part-conditions of the judgment function shows its importance for the categories of reality, causality and substantiality, and for the origination of the number concept. Causality is, in primitive experience, the interaction of psychical (intuitively apprehended) and physical. (It is interesting to compare this view with Exner's account of the biological origin of the causal notion from the visual perception of movement.) Finally, the totality of physical and psychical occurrence is to be regarded as the efflux of a divine will.

These epistemological and metaphysical consequences of the writer's thesis are evidence of its 'life' and many-sided applicability. To consider them in detail would here be out of place. For the psychologist, as was said just now, the third is the cardinal chapter of the book. His interest will lie in the testing of Professor Jerusalem's theory by concrete instances taken from all possible departments of logic,—in the translation of logic, by its aid, into psychology. This interest can subsist alongside even of a complete rejection of the author's psychophysics and metaphysics.

E. B. T.

*Die moderne physiologische Psychologie in Deutschland. Ein historisch-kritische Untersuchung mit besonderer Berücksichtigung des Problems der Aufmerksamkeit.* Von DR. W. HEINRICH. Zürich 1895, pp. 232, 4 marks.

In the introduction Dr. Heinrich gives a concise *résumé* of the leading psychologists preceding Fechner, discussing especially their contributions to the question of attention. As important for the modern psychological views of parallelism and attention, he naturally lays stress upon the mechanical views of Descartes and Herbart. Herbart's two definitions of attention are quoted and criticised: "Ursprünglich ist die Aufmerksamkeit nichts anderes, als die Fähigkeit, einen Zuwachs der Vorstellungen zu erzeugen," and "Attentus dicitur is qui mente sic est dispositus ut ejus notiones incrementi quid capere possint." *De attentionis mensura*, etc. Re voluntary attention Herbart says that our psychical life has its pure mechanical laws, but that they are laws of its own nature, not borrowed of the corporeal world; yet are they more similar to the Laws of *Druck und Stoss* than to the miracle of a "vorgeblich unbegreiflicher Freiheit." Ulrici and Lotze are said to form the transition from "psychology with a soul" to "psychology without a soul." Lotze's fine but unsystematic observations on attention are properly estimated. "With Lotze we leave behind the province of 'psychology with a soul'" and proceed to the teachings of the modern writers, who take into account the doctrine of the Conservation of Energy. "With the introduction of this principle and the increased number of observed facts which made the dependence of the psychical on the physiological and pathological changes an unassailable certainty," psychology entered upon the great experimental road which it is for her now to follow.

Fechner's work is outlined fairly. As direct result of the physical principle of the Conservation of Energy, the principle of *Psychophysical Parallelism* was emphasized; from this again arose the Law of the Relations of the Psychical to the Physical, or *Weber's Law*, and at the same time the different *Methods of Measurement* in psycho-physical research. Hence Fechner is "Vater der Psycho-Physik und Vater der experimentellen Psychologie."